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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/828,531	04/14/2004	M. Zouhair Atassi	MSC-21947-1-CU	4293

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EXAMINER	
SAUNDERS, DAVID A	

ART UNIT	PAPER NUMBER
1644	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/828,531	ATASSI ET AL.	
	Examiner	Art Unit	
	David A. Saunders	1644	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 December 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,5,6,9-11,13,14,19,20 and 22-28* is/are pending in the application.

4a) Of the above claim(s) *22-26* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,5,6,9-11,13,14,19,20,27 and 28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

AMENDMENT ENTRY

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/18/07 has been entered. Following entry thereof, Claims 1, 5-6, 9-11, 13-14, 19-20 and 22-28 are pending. Claims 1, 5-6, 9-11, 13-14, 19-20 and 27-28 are under examination.

OBJECTION(S)/REJECTION(S) OF RECORD WITHDRAWN

The amendment has overcome previously stated issues as follows:

The rejection of claims 1-4, 6-8, 11-12 and 21 under 35 USC 112, 2nd paragraph, for recitations of "corresponds"/ "corresponding" to a sequence.

The rejection of claims 1, 11-14 and 21 under 35 USC 112, 2nd paragraph, for failing to state how the "total urokinase concentration" is determined.

The rejection of claims 11-13 and 21 under 35 USC 112, 2nd paragraph, for recitations of "determining the amount".

The rejection of claims 11, 12, 13 and 21 under 35 USC 112, 2nd paragraph, for inconsistent recitations of "which binds to" vs. "which is bound to".

The rejection of claim(s) 5 under 35 USC 112, 2nd paragraph, for recitation of "from which it is directed against".

The rejection of claim(s) 12 under 35 USC 112, 2nd paragraph, for being incomplete, since claim 12 has been cancelled.

The rejection of claims 1-17 and 19-21 under 35 USC 112, 1st paragraph, for new matter by virtue of reciting "...at least one peptide comprised of ".

The rejection of claims 1-17 and 19-21 under 35 USC 112, 1st paragraph, for new matter by virtue of reciting an immunological composition directed against "at least one" (including only one) of a Markush group of peptides.

The rejection of claim(s) 1-17 and 19-20 under 35 USC 112, 1st paragraph, for new matter by virtue of reciting "at least one immunological composition directed against each peptide".

The rejection of claim(s) 9 and 20 under 35 USC 112, 1st paragraph, for new matter by virtue of reciting "or any combination".

The rejection of claim(s) 11-13 and 21 under 35 USC 112, 1st paragraph, for new matter by virtue of reciting "comprised of the following steps" as a Markush group of 3 alternatives.

The rejection of claims 1-17 and 19-21 under 35 USC 112, 1st paragraph, for lack of enablement by virtue of reciting "...at least one peptide comprised of ".

The rejection of claim(s) 1-17 and 19-21 under 35 USC 112, 1st paragraph, for lack of enablement for determining the total urokinase concentration by virtue of reciting the use of an immunological composition directed against "at least one" (including only one) of a Markush group of peptides.

The prior art rejection of claims 1, 5, 9 and 11-14 based upon Morrison (5,869,238).

MAINTAINED REJECTION(S) UNDER 35 USC 112, FIRST PARAGRAPH

Claims 1, 5-6, 9-11, 13-14, 19-20 and 27-28 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicant was not in possession of "functionally equivalent peptide(s) containing an amino acid substitutions with a difference in the hydropathic index value of +/- 1-2".

As previously stated in the Final rejection mailed on 7/5/07, even if the claim language were limited to the extent that only substitutions that conserve the hydropathic index values of the amino acid being substituted and its replacement (the claims are now thus limited, following entry of the amendment of 12/18/07), there would still be a lack of written description and enablement; because substitutions that conserve the hydropathic index values of the amino acid being substituted and its replacement are precisely the kinds of substitutions that can occur in homologues of urokinase, and it has been taught by applicant that the affinities of the immunological compositions for peptides having the recited sequences must be "substantially higher" than their affinities for homologues of other species.

Claims 1, 5-6, 9-11, 13-14, 19-20 and 27-28 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement, because the specification, while being enabling for the use of antibodies specific for the particularly recited SEQ ID NOS, does not reasonably provide enablement for the use of antibodies specific for the full genus of peptides including those that are "functionally equivalent peptide(s) containing an amino acid substitutions with a difference in the hydropathic index value of +/- 1-2". The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to practice the invention commensurate in scope with these claims.

As previously stated in the Final rejection mailed on 7/5/07, even if the claim language were limited to the extent that only substitutions that conserve the hydropathic index values of the amino acid being substituted and its replacement (the claims are now thus limited, following entry of the amendment of 12/18/07) there would still be a lack of enablement, since applicant has taught in para. [0031] that one "might obtain a peptide having similar biological activity". As previously noted, the experimentation required to produce the antibodies which would be operative in detecting urokinase would be undue. This is because one

would need to immunize a different host animal with each of the peptides encompassed by the genus and then characterize the antibodies produced by each animal, in order to determine if the antibodies produced against the "functionally equivalent peptide(s)" do, in fact have binding specificity for urokinase and not for homologous proteins (e.g. trypsin). It is to be noted that the mere conservation of hydrophobicity in the substituted peptides used fro generating an immunolgical composition would not assure that there would be a conservation of binding specificity of the antibodies (immunological compositions), because the binding specificity of any antibody is dependent upon numerous factors, beside the hydrophobicity of the peptide/epitope that the antibody binds to. For example, the binding specificity of an antibody can be also dependent upon the bulkiness of and/or the orientation of hydrophobic or charged moieties on the peptide/epitope that the antibody binds to. The mere introduction of claim language concerning amino acid substitutions with a difference in the hydropathic index value of +/- 1-2" has not provided enablement for the full scope of the claims.

Applicant's arguments filed 12/18/07 have been fully considered but they are not persuasive for the above reasons.

NEW REJECTION(S) UNDER 35 USC 112, FIRST PARAGRAPH

Claims 1, 5-6, 9-11, 13-14, 19-20 and 27-28 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had

possession of the claimed invention. Applicant has entered new matter in the "generating" step of claims 1 and 13 and in the "immunological compositions" paragraph of claim 14.

Specifically claim 1 can be read as "generating at least one immunological composition against at least one of a first peptide... a second peptide... and a third peptide. This can be understood to mean that "at least one immunological composition" is generated against at mixture of a first peptide... a second peptide... and a third peptide. No such immunological composition has been disclosed. Like considerations apply to claims 13-14. Applicant must indicate that one is "generating at least one immunological composition" against each one of the listed groups of a first peptide... a second peptide... and a third peptide, in other words that one is generating 3 immunological compositions. It is further suggested that applicant recite 3 distinct, indented "generating steps" in claims 1 and 13, and that applicant recite 3 distinct, indented "immunological compositions" in claim 14, in order to comply with 37 CFR 1.75(i).

Claims 1, 5-6, 9-11, 13-14, 19-20 and 27-28 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicant has entered new matter in the "contacting" step of claims 1 and 13-14.

Specifically, the claims merely require "contacting said sample with each of said at least one immunological compositions". This can be read to mean that all 3 of the "at least one immunological compositions" are together added to the same sample aliquot. The original claims and disclosure required that each of the 3 "at least one immunological compositions" be separately added to different sample aliquots.

Claims 1, 5-6, 9-11, 13-14, 19-20 and 27-28 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Applicant has not taught how one should use "at least one immunological composition" is generated against at mixture of a first peptide... a second peptide... and a third peptide.

Specifically, as noted supra, claim 1 can be read as "generating at least one immunological composition against at least one of a first peptide... a second peptide... and a third peptide. This can be understood to mean that "at least one immunological composition" is generated against at mixture of a first peptide... a second peptide... and a third peptide. Applicant has not disclosed how such an immunological composition is to be used. To the contrary, applicant has indicated that one must use "at least one immunological composition" generated separately against each one of the listed groups of a first peptide... a second

peptide... and a third peptide. Applicant has taught that 3 such compositions would necessarily be used, for one to arrive at a calculation of the "total concentration" as recited in the concluding paragraph of claim 1.

Like considerations apply to claims 13-14.

Claims 1, 5-6, 9-11, 13-14, 19-20 and 27-28 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Applicant has not disclosed how "to measure the quantity and type of each of said at least one immunological compositions bound in said sample", for the case in which all 3 of the "at least one immunological compositions" are together added to the same sample aliquot. Unless each of the 3 "at least one immunological compositions" are separately added to different sample aliquots, there is no way in which one can "to measure the quantity and type of each of said at least one immunological compositions bound in said sample".

CONTACTS

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David A. Saunders, whose telephone number is 571-272-0849. The examiner can normally be reached on Mon.-Thu. from 8:00 am to 5:30 pm and on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Larry Helms, can be reached on 571-272-0832. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Typed 1/7/08 DAS

David A Saunders

DAVID A. SAUNDERS
PRIMARY EXAMINER